

IN THE CLAIMS:

Applicants, using the revised amendment format now permitted in view of the anticipated adoption of proposed revised 37 C.F.R. § 1.121, submit the following amendments to the claims:

1. (Currently amended) A diagnostic or prognostic assay for cancer, comprising:
  - (a) obtaining a tissue sample from a test tissue;
  - (b) performing a methylation assay on DNA from the tissue sample, wherein the methylation assay determines the ~~hypermethylation~~ state of a CpG dinucleotide within at least one DNA sequence selected from the group consisting of ~~sequences of SEQ ID NOS:34-38, and sequences having a nucleotide sequence at least 98% identical to sequences of SEQ ID NOS:34-38,~~ CpG island sequences contiguous with, or encompassing at least one nucleotide associated with sequences of SEQ ID NOS:35-38, and CpG island sequences associated with sequences having a nucleotide sequence at least 98% identical to sequences of SEQ ID NOS:35-38, wherein a CpG island sequence is a contiguous associated with the sequence of a particular SEQ ID NO if the CpG island sequence is a sequence of genomic DNA that is contiguous in the genome with, and encompasses at least one nucleotide of the particular SEQ ID NO sequence, and wherein the particular SEQ ID NO sequence is itself a portion of a larger CpG island sequence of about 0.2 to about 1 kb in length that satisfies the criteria of having both a frequency of CpG dinucleotides corresponding to an Observed/Expected Ratio >0.6, and a GC Content >0.5; and
  - (c) determining a diagnosis or prognosis based, at least in part, upon the methylation state of the CpG dinucleotide within the DNA sequence, compared to that of control DNA, wherein the determined methylation state is either hypermethylation or normal methylation, and wherein the cancer is bladder or prostate, breast or colon cancer.
2. (Currently amended) The diagnostic or prognostic assay of claim 1, wherein the DNA sequence is a sequence selected from the group consisting of CpG island sequences contiguous with, or encompassing at least one nucleotide associated with sequences of SEQ ID NOS:35-38, and CpG island sequences associated with sequences having a nucleotide sequence at least 98% identical to sequences of SEQ ID NOS:35-38.
3. (Cancelled).
4. (Previously amended) The diagnostic or prognostic assay of claim 1 wherein the methylation assay procedure is selected from the group consisting of MethylLight, MS-SNuPE,

MSP, MCA, COBRA, and combinations thereof.

5. (Cancelled).

6. (Cancelled).

7. (Currently amended) A kit useful for the detection of a methylated CpG-containing nucleic acid comprising a carrier means containing one or more containers comprising:

(a) a container containing a probe or primer which hybridizes to any region of at least 12 contiguous nucleotides of a sequence selected from the group consisting of SEQ ID NOS:34-37, and 38 SEQ ID NOS:34-38, and sequences having a nucleotide sequence at least 98% identical to sequences of SEQ ID NOS:34-38; and

(b) additional standard methylation assay reagents required to affect detection of methylated CpG-containing nucleic acid based, at least in part, on the probe or primer.

8. (Previously amended) The kit of claim 7, wherein the additional standard methylation assay reagents are standard reagents for performing a methylation assay from the group consisting of MethylLight, MS-SNuPE, MSP, MCA, COBRA, and combinations thereof.

9. (Currently amended) The kit of claim 7, wherein the probe or primer comprises at least 12 contiguous nucleotides of a sequence selected from the group consisting of SEQ ID NOS:34-37, and 38 SEQ ID NOS:34-38, and sequences having a nucleotide sequence at least 98% identical to sequences of SEQ ID NOS:34-38.

10. (Currently amended) An isolated nucleic acid molecule comprising a methylated or unmethylated polynucleotide sequence selected from the group consisting of sequences of SEQ ID NO:34, SEQ ID NO:37, and SEQ ID NO:38, and sequences having at least 98% sequence identity thereto.

11. (Original) The nucleic acid of claim 10, wherein the nucleic acid is methylated.

12. (Original) The nucleic acid of claim 10, wherein the nucleic acid is unmethylated.